

SUMMARIES OF ACTIVITIES DURING HURRICANE HARVEY

EPA REGION 6

Introduction

On August 25, 2017, Hurricane Harvey impacted the Texas Coast as a Category 4 Hurricane. EPA Region 6 immediately activated their Regional Emergency Operations Center (REOC) and deployed personnel to immediately begin coordinating with the State of Texas on emergency response activities. In addition, FEMA requested ESF-10 support to State Emergency Operations Center (SEOC) and the FEMA Regional Response Coordination Center (RRCC). On August 28, FEMA issued a Mission Assignment to EPA Region 6, requesting ESF-10 assistance to the State of Texas in support of assessment and response operations to actual or threatened hazardous materials and oil releases/discharge.

The State of Texas requested support with field operations, to include, but not limited to: identify and assess impacts to drinking water and wastewater critical infrastructure; assist in the implementation of Response Manager tracking system; response to oil and hazardous materials discharges/releases; augment personnel for response operations; conduct aerial assessments to assess discharges/releases; and collect and dispose of accumulations of orphaned containers, and damages to oil/chemical facilities. Response Manager is used during the incident to track operations (emergency responses; water assessments; orphaned containers; as well as other information).

At the peak of the response, over 170 EPA personnel worked with State and local officials on this effort. For information on the response, EPA established a website with up-to-date information: <https://response.epa.gov/Hurricaneharvey2017>. Additionally, the State of Texas (TCEQ) has a website to provide the citizens of Texas with information: <https://www.tceq.texas.gov/response/hurricanes>

Water/Wastewater Assessments

On August 28, 2017, EPA Region 6 provided 10 staff members to augment the TCEQ phone bank in Austin to contact water and waste water treatment facilities in the impacted areas to determine their operational status, as well as Boil Water Notices. Based on these phone contacts, several facilities were targeted for on-site visits to assess the facility's ability to conduct operations. As of September 15, 2017, phone contacts were made to approximately 6,750 drinking water plants and 4,600 waste water plants.

EPA Region 6 also provided 16 additional staff members to assist TCEQ with conducting on site assessments at water and wastewater systems in the Houston area. On site assessments were conducted at approximately 625 drinking water and 440 waste water treatment facilities as of September 15, 2017, when EPA operations were concluded. The results of the assessments and phone interviews were shared with the U.S. Army Corps of Engineers for their Infrastructure Work. The TCEQ will use the assessment results to provide future assistance to the impacted facilities.

As of September 15, of the 2,022 systems designated for assessment and follow up, EPA's collaborative work with the state ensured the return of 1,945 community water systems to fully operational status. These systems cover 99% of the population in the greater Houston area (7.23 out of 7.26 million served). The remaining system restorations and lifting of boil water notices oversight were transitioned to the TCEQ regional offices.

Additional information on boil water notices can be found at:
<https://www.tceq.texas.gov/response/hurricanes>

Chemical Screening with ASPECT, TAGA, and PHILIS

The U.S. EPA Airborne Spectral Photometric Environmental Collection Technology (ASPECT) is an airborne platform equipped with special chemical and radiological sensors and imagery technologies. It detects chemicals while collecting aerial photos and videos for situational awareness during an incident. The ASPECT flew 28 flights over 112 hours covering 134 Risk Management Plan (RMP) facilities, 456 drinking water plants and 105 waste water plants in support of the Hurricane Harvey response from 31 August 2017 – 11 September 2017. The screening level results from ASPECT were compared to the list of Texas Commission on Environmental Quality (TCEQ) short-term Air Monitoring Comparison Values (AMCVs). The screening data found no exceedances of the short-term AMCVs.

EPA deployed two Trace Atmospheric Gas Analyzer (TAGA) mobile laboratories to assist in response activities as a result of Hurricane Harvey. The TAGA is self-contained and is capable of real-time monitoring of outdoor air emissions. The TAGA lab monitored the ambient air in the vicinity of approximately 25 facilities in the impacted areas. The facilities ranged over 321 miles and the TAGA covered over 640 miles in conducting the air monitoring. No monitored readings exceeded the Texas Commission on Environmental Quality (TCEQ) Air Monitoring Comparison Values (AMCV) short-term screening levels.

Portable High-Throughput Integrated Laboratory Identification System (PHILIS) is a mobile laboratory that EPA used to screen floodwaters associated with the Arkema fire early in the response. Floodwater samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs). No VOCs or SVOCs were detected in the Arkema floodwater samples.

Orphaned Containers

At the conclusion of each hurricane in Region 6, there is always orphaned containers which result of the surge or flooding conditions, usually ending up in or around waterways. Orphaned containers are those containers which are displaced from facilities or residences due to high winds, storm surge, or flooding. These can range in size from small 5-gallon buckets found at residences (such as paint, pesticides, etc), propane cylinders, 55-gallon drums, or larger tanks.

EPA, in coordination with TCEQ, Texas General Land office (TGLO), and the U. S. Coast Guard, established three branches in Corpus Christi, Houston, and Beaumont, Texas to assess, collect, characterize, and dispose of orphan containers in the impacted areas.

Reconnaissance/assessment teams identified targets from aerial and ground reconnaissance, including the ASPECT aircraft and helicopters. Approximately 1,000 containers, including drums, cylinders, smaller containers, totes, and even above ground storage tanks (ASTs) were assessed and transported to waste pads. Once there, the contents are characterized, bulked, and shipped off for ultimate disposal.

Emergency Responses

EPA Region 6, as well as TCEQ, received over 200 reports of releases/spills of hazardous materials and oil throughout the impacted areas. EPA responded to approximately 35 of the releases to assess the extent of the release, impact to human health and the environment, and to ensure the release was being properly addressed by the responsible party.

One such response was to the Arkema facility in Crosby, Texas, to support the response activities of the Crosby Volunteer Fire Department and the Harris County Fire Marshal's Office during event and resulting evacuation of the surrounding community. EPA collected downstream surface water runoff samples at four locations outside the evacuation zone, near residential areas, the results being less than the screening levels that would warrant further investigation. EPA also flew the ASPECT aircraft to test resulting smoke from the fires at Arkema. ASPECT found no exceedances of the Texas comparison values. The EPA On-Scene Coordinator participated in the Unified Command during the response.

Additionally, OSCs were deployed to two oil spills in the impacted areas. TCEQ requested federal assistance in oversight of an oil spill in Lumberton, as a result of flooding caused by Hurricane Harvey. There was an unknown amount of thick oil product released.

On 09/19/17, TCEQ received a report of a waterline break with a sheen on the water at the Port Arthur RV Resort. Texas Railroad Commission (TRRC) and EPA responded to the scene to find that the release flowed into a retention pond and potentially to Taylor's Bayou.

In both spill EPA OSCs provided oversight to the responsible party, coordinating with State officials.